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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,982	10/18/2004	Juergen Pille	DE920030003US1	5981
24241	7590	06/24/2005	EXAMINER	
IBM MICROELECTRONICS INTELLECTUAL PROPERTY LAW 1000 RIVER STREET 972 E ESSEX JUNCTION, VT 05452			LE, THONG QUOC	
			ART UNIT	PAPER NUMBER
			2827	

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

fm

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/711,982	PILLE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thong Q. Le	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____                                                 |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/18/2004</u> .                                                          | 6) <input type="checkbox"/> Other: ____                                     |

### **DETAILED ACTION**

1. Claims 1-11 are presented for examination.

#### ***Information Disclosure Statement***

2. This office acknowledges receipt of the following items from the Applicant:  
Information Disclosure Statement (IDS) filed on 10/18/2004.
3. Information disclosed and list on PTO 1449 was considered.

#### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Specification***

5. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Abstract***

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract has more than 150 words in length.

### ***Drawings***

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the multiplexer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Regarding claim 10, this claim contains "a multiplexer", which is fail to defined in specification nor drawing. This claim should be canceled.

### ***Claim Objections***

8. Regarding claim 3, line 2, delete " " before read cycle.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. The term " SRAM" in claim 2 is a relative term which renders the claim indefinite. The term " SRAM" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Since independent claim 1 is a method claim and dependent claim 2 discloses an apparatus. An apparatus claim can not depends from a method claim. More specifically,

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SRAM array does not relative with claim 1, because in claim 1, a memory is defined as a dynamic hardware memory block.

As described above, claim 2 should be amended for more clearly or canceled.

12. Claim 10 is rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Since claim 10 discloses "a multiplexer", which is not shown in drawing and does not defined in specification. Therefore, this claim is an invalid claim.

13. The term " second precharge signal" in claims 4 and 7 is a relative term which renders the claim indefinite. The term " second precharge signal " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Since, the claims 4, 7 disclose " a second precharge signal", which is not defined in specification. Claims have to be amended for clearly.

***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Roy (U.S. Patent No. 4,926,384).

Regarding claim 1, Roy discloses a method for accessing memory cells within a dynamic hardware memory block operated with a precharge mechanism, in which differential read and write access operations are performed by activating a true bitline and a complement bitline (Column 3, lines 12-25), the method comprising:

determining whether a next a current access operation is memory access operation occurring subsequent to a read access operation or a write access operation (Column 1, lines 15-25), and

performing a precharge of the true and complement bitlines access operation follows the current access operation only when a read access operation follows the current access operation (Column 4, lines 37-45, Column 10, lines 62-67, Column 11, lines 1-15, Column 11, lines 45-51, Column 15, lines 35-53).

Regarding claims 2-6, Roy discloses wherein access memory (SRAM) array comprises the memory cells a static random (Column 1, lines 24), and in which a first precharge control signal is combined with a read cycle (n+1) control signal to evaluate whether a next memory access cycle comprises a read access or a write access

(Column 2, lines 42-46, Column 5, lines 45-67), and wherein the read cycle ( $n+1$ ) control signal is asserted according to an operating mode of the memory array, such that a write access operation occurring over a plurality of system clock cycles results in a continuous assertion of the next read cycle ( $n+1$ ) control signal until the write access operation is complete, and wherein the read cycle ( $n+1$ ) control signal is asserted two system clock cycles in advance of a next memory access operation during a delay when an address of the memory array is specified and current access operation is complete, and wherein the next read cycle ( $n+1$ ) control signal is asserted after a delay of one clock cycle during a period of time when no memory operation is performed (Figure 12).

Regarding claims 7-11, Roy discloses an integrated circuit memory array adapted for low power operation (Figure 3), comprising: a plurality of addressable memory cells arranged in rows and columns (Column 14, lines 35-40), the memory cells segmented into a plurality of memory blocks (Figure 5, BLK); a plurality of column lines (Column 14, lines 35-40), each coupled to a corresponding column of memory cells; a plurality of row lines (Column 14, lines 35-40), each coupled to a corresponding row of memory cells; a precharge circuit (Column 15, lines 62-65) coupled to the plurality of row lines, the precharge circuit provided to assert the plurality of row lines in a memory block to a high logic level following a memory access operation; a first precharge signal controller (Figure 3, T44, CWTB) coupled to the precharge circuit, the first precharge signal controller provided to generate a first precharge control signal; a read cycle signal controller (Column 15, lines 36-42) for generating a read cycle ( $n+1$ ) signal when a next memory access operation is read



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access operation; and a logic element to evaluate the first precharge control signal and the read cycle control (n+1) signal, the logic element asserting a second precharge control signal when a next memory access is a read access operation for controlling the precharge circuit (Column 15, lines 35-65), and wherein the logic element comprises a multiplexer (Column 15, lines 59-60), and wherein the memory array is a static random access memory (SRAM) (Column 1, lines 24).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai V. Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le  
Primary Examiner  
Art Unit 2827

**THONG LE**  
**PRIMARY EXAMINER**